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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,850	03/22/2004	Victor M. Casella	311.30B	2468

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EXAMINER	
KUMAR, PREETI	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,850	CASELLA ET AL.	
	Examiner	Art Unit	
	Preeti Kumar	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *68-89* is/are pending in the application.

4a) Of the above claim(s) *87-89* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *68-86* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *87-89* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Final Rejection

Response to Amendment

1. Claims 68-89 are pending. Claims 71-89 are newly presented in the amendment filed 9/20/2006. Claims 1-67 are withdrawn from further consideration.

2. Newly submitted claims 87-89 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 87-89 are directed to a method of depositing 2 distinct compositions and 2 distinct curing steps.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 87-89 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

3. The rejection of claims 68-70 under 35 U.S.C. 103(a) as obvious over Haq et al. (US 6,075,003) is withdrawn.

4. The rejection of claims 68-70 under 35 U.S.C. 103(a) as being unpatentable over Gresser (US 4,724,095) in view of Haq et al. (US 6,075,003) is withdrawn.

Response to Arguments

5. Applicant's arguments filed 9/21/2006 with respect to Haq et al. and Gresser have been fully considered but are moot in view of the new ground(s) of rejection.

Applicants urge that Haq et al do not teach the claimed curing step. As the new grounds of rejection below indicates, the it would have been obvious to cure a fabric at

a temperature above ambient temperature but less than 100 C, as recited by the instant claims, because Haq et al. suggests the use of a tumble dryer which provide heat at various temperatures and Green teaches the state of the art that conventional tumble dryers have a maximum temperature of 71C (160F).

Also Applicants urge that that both Haq et al. and Green do not suggest the criticality in the control of the zeta potential. Specifically, Applicants urge that the prior art/arts do not provide a showing of a method to select or adjust the zeta potential of a treatment liquor for means of depositing a hydrophobic agent. This argument is not on point and cannot be found convincing because the claims presented for examination do not recite a method of adjusting the amount of the zeta potential modifier; in fact the pending claims do not recite any amount at all, much less an amount range to *adjust* in. The claims presented for examination are drawn to a method of treating a fabric with the deposition of a composition consisting essentially of a hydrophobic agent and an effective amount of zeta potential modifier as recited by the instant claims and a step of curing as recited by the instant claims. It is not seen how the effective amount of zeta potential modifier claimed and the amount of zeta potential modifier taught by the prior art references are different and unobvious over one another, and rendering the Applicant to urge that the effective amount recited in the pending claims is novel.

The teachings of both Haq et al. and Gresser encompass the material limitations of the instant claims and accordingly are used as primary references in the New Grounds of Rejection below.

Priority

6. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 10/338,350, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Specifically, the prior filed application fails to provide support for the material limitations of claim 68 to a method of treating fabrics with a composition consisting essentiallv of a hydrophobic agent having a melting point or glass transition temperature of less than l00°C wherein said hydrophobic agent is not a fluoropolymer and an effective amount of a zeta potential modifier so that the treatment liquor has a zeta potential that is positive and greater than zero millivolts; and wherein the ratio of hvdrophobic acent to zeta potential modifier is greater than or equal to l :3. The prior filed application is directed toward a fluoropolymer AND a hydrophobic agent AND a zeta potential modifier. See all

examples and claim 41. Also, there is no support for the claimed 1:3 ratio in the prior-filed application. Accordingly, the disclosure of the prior-filed application, Application No. 10/338,350, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for claims 68 and 72 of this application.

New Grounds of Rejection

Claim Objections

7. Claims 70 and 73 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, claim 68 as amended recites limitation to a composition ***consisting essentially of*** a hydrophobic agent and a zeta potential modifier.

Note that the MPEP 2111.03 delineates that the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original).

The limitation of claim 70 to the composition further comprising an additive does not further limit the composition of independent claim 68.

The limitation of claim 73 to the composition further comprising a fluoropolymer does not further limit the composition of independent claim 68.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 68 and 80-82 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 68, Applicants point to table 15 and inventive compositions 54-58 for support of the 1:3 ratio of hydrophobic agent to zeta potential modifier. This claimed ratio is new matter, as there is no data within table 15 to result in the claimed ratio of 1:3. Apparently, Applicants remarks on page 8-9 recite various ratios from which Applicants selected the claimed ratio of 1:3, however, their calculations are ambiguous since the numbers do not at all correspond to formulations 54-58 and the original specification as filed provides no basis for the claimed language of "wherein the ratio of hydrophobic agent to zeta potential modifier is greater than or equal to 1:3".

Regarding claims 80-82, Applicants point to table 6 and paragraphs 0194-0198 of the published application. However, the claimed initial contact angles of greater than 80, 95, and 110 degrees recited within claims 80, 81, 82 is new matter, since there is no

recitation of these contact angles within the Applicant's originally filed specification. In table 18, Examiner finds support for a contact angle of 124 and 127 in a composition consisting essentially of the claimed cationic paraffin wax hydrophobic agent and cationic surfactant zeta potential modifier. See formulation 71 in table 18 of Applicant's publication US 2005/0204477.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 68-86 are rejected under 35 U.S.C. 103(a) as obvious over Haq et al. (US 6,075,003) in view of Green (US 4,920,000).

Haq et al. teach a fabric laundry treatment composition comprising: a) a paraffin wax emulsion; and b) a cationic softening compound or a polymeric delivery aid or mixtures thereof. See col.2,ln.36-37 and lines 60-65.

Specifically, regarding the hydrophobic agent, Haq et al. teaches a paraffin wax. See col.2,ln.38.

Specifically regarding the the zeta potential modifier, Haq et al. teach that it is advantageous for environmental reasons to use quaternary ammonium material that is biologically degradable. Specifically Haq et al. teach suitable deposition aids include cationic fabric softening compounds and polymeric delivery aids that are able to attach themselves to the fluorocarbon soil release agent and cause enhanced delivery to the fabric. Suitable cationic fabric softening compounds are water insoluble quaternary ammonium material. A preferred cationic softener is distearyl dimethyl ammonium chloride. It is preferred if the long chain alkyl or alkenyl groups of the fabric softening compound are predominantly linear. Di(tallowyloxyethyl)dimethyl ammonium chloride, available from Hoechst, is especially preferred. A second preferred type of quaternary ammonium material include 1,2 bis[hardened tallowoyloxy]-3-trimethylammonium propane chloride. Another form of preferred polymeric delivery aids are cationic polymers, for example cationic starch derivatives, cationic cellulose derivatives, guar gums, quaternized protein derivatives, homo- and co-polymers of dimethyldiallylammonium chloride, and homo- and co-polymers of quaternized dimethylaminoethyl methacrylate. Please see col.3-4. Haq et al. are silent as to the millivolts of the zeta potential, however, it is reasonable to presume that the zeta potential modifier taught by Haq et al, namely the cationic surfactants, have the claimed range of positive and greater than zero millivolts and less than about +150 millivolts as recited by the instant claims, because Haq et al. teach the same cationic material

namely fatty amines and ammonium salts encompassed by the material limitations of the instant claims.

Regarding the curing step, Haq et al. teach that after treatment of laundry with the fabric conditioner of the invention the laundry is heat treated to cure the fluorocarbon polymer by tumble drying the laundry. See col.2, ln.40-45.

Haq et al. teach that the product may be in any form such as liquid or solid compositions. Solid composition in this context includes compositions in the form of a tablet, a gel, a paste and preferably granules or a powder. See col.4, ln.45-50.

Regarding various additives, Haq et al. teach the composition can also contain one or more optional ingredients, selected from non-aqueous solvents, pH buffering agents, perfumes, perfume carriers, fluorescers, colorants, hydrotropes, antifoaming agents, antiredeposition agents, polymeric or other thickeners, enzymes, optical brightening agents, opacifiers, anti-shrinking agents, anti-wrinkle agents, anti-spotting agents, germicides, fungicides, anti-oxidants, anti-corrosion agents, drape imparting agents, antistatic agents and ironing aids. Please see col.4, ln.34-44.

Haq teaches that the fluorocarbon polymer is a perfluoroalkyl acrylic copolymer, a perfluoroalkyl methacrylic copolymer, a fluorinated substituted urethane or a fluorinated acrylic copolymer. It is further preferred if the fluorocarbon polymer is present as a cationic emulsion. An example of a particularly preferred polymer present as a cationic emulsion is Zonyl 6991 (trademark ex Du Pont) an acrylate polymer. It is advantageous if the cationic emulsion of fluoropolymer further comprises a short chain

carboxylic acid. See col.2. Haq et al. illustrate the utility of specifically 18% active fluoropolymer in col.6, ln.63.

In the examples in col.5-6, Haq et al. teach a fabric laundry treatment composition comprising: a) 5.28 wt.% of hydrophobic fluorocarbon polymer or a fluorocarbon copolymer or mixtures thereof; and b) 2.0 wt% of a cationic softening compound or a polymeric delivery aid or mixtures thereof. The examples in col.5-8 illustrate the utility of the cationic zeta potential modifier in a ratio encompassed by the instant claims.

A further aspect of the invention provides a method of treating fabrics to provide them with soil repelling properties comprising the steps of: i) adding the formulation described above to water; ii) washing, or preferably rinsing, laundry in the resulting liquor; iii) drying the laundry in a tumble dryer. See col.2,ln.examples in col.5-8.

Haq et al. do not teach a method of treating fabrics in a washing machine. However, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to treat a fabric in a washing machine, as recited by the instant claims, because the teachings of Haq et al. suggest washing or rinsing the fabric with the treatment composition in general.

Also, Haq et al. do not teach a method of curing said fabric at a temperature above ambient temperature but less than 100 C. Haq et al. do provide motivation to one of ordinary skill in the art, to cure the treatment composition by tumble drying. See col.2,ln.43.

Green teaches the state of the art that conventional tumble dryers have a maximum temperature of 71C (160F). See col.3,ln.10-12.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to treat a fabric with a composition comprising a hydrophobic agent and a zeta potential modifier and curing said fabric at a temperature above ambient temperature but less than 100 C, as recited by the instant claims, because Haq et al. suggests the use of a tumble dryer which provide heat at various temperatures and Green teaches the state of the art that conventional tumble dryers have a maximum temperature of 71C (160F).

One of ordinary skill in the art would have been motivated to combine the teachings of Green with that of Haq et al. with a reasonable expectation of success because both teach the analogous art of drying fabric in a tumble dryer.

12. Claims 68-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gresser (US 4,724,095) in view of Haq et al. (US 6,075,003) in view of Green (US 4,920,000).

Gresser teaches a detergent composition adopted for the washing of a fibrous textile substrate to impart stain repellency and antiredeposition properties comprising a composition having hydrophilic/hydrophobic anti-redeposition copolymer which comprises at least one of the recurring units ethylene oxide and alkylene oxide, said copolymer being such as to reduce the zeta potential of the fibers of said textile substrate to a value of 0.5 times or less the zeta potential of the bare fiber content

thereof, and said effective amount being such that at least 0.02 mg of said copolymer is adsorbed onto said textile fibers per gram of substrate. See abstract.

Specifically regarding the hydrophobic agent, Gresser teaches in col.6,ln.9-18, hydrophobic agents encompassed by the material limitations of the instant claims. The prior art, Gresser, is silent as to the claimed properties of the hydrophobic agent and do not explicitly teach the limitations to the melting point or glass transition temperature of the hydrophobic agent. However, it is reasonable to presume that said limitations are encompassed by the invention of Gresser because the presumption is supported by the use of similar materials (i.e. clothing garments) and in the similar production steps (i.e. contacted with hydrophobic agent in a washing machine) to produce stain repellent textile. The burden is upon the applicant to prove otherwise.

Regarding the zeta potential modifier, Gresser teaches the utility of various cationic agents, namely, silica, sodium silicate, sodium stearate, and triethanolamine. See col.6, 5, 31, 39 and col.9,ln.11. Gresser is silent as to the millivolts of the zeta potential, however, it is reasonable to presume that the zeta potential modifier taught by Gresser, namely the cationic agents, silica, sodium silicate, sodium stearate, and triethanolamine, have the claimed range of positive and greater than zero millivolts and less than about +150 millivolts as recited by the instant claims, because Gresser teach the same cationic material encompassed by the material limitations of the instant claims.

Specifically regarding the fluoropolymer, Gresser teaches the utility of a fluorescent whitening agent having the tradename Tinopal DMSX. See col.6,ln.43.

Regarding the additives of claim 70, Gresser teaches that the detergent composition comprises various non-ionic surface active agent, such as, for example, polyoxyethylenated alkylphenols, polyoxyethylenated aliphatic alcohols, glycols and polyglycols. See col.9,ln.1-5.

In col.6, test 2, Gresser teach a composition comprising 10% paraffin hydrophobic agent, 8.6% sodium silicate zeta potential modifier, and 0.2% fluorescent whitening agent. In col.10, case 3, Gresser illustrates that the antiredepositon composition comprising the hydrophobic agent, zeta potential modifier and fluoropolymer is added to the wash medium before the wash cycle of the washing machine containing the fabrics to be treated.

Gresser does not teach curing the fabric at a temperature above ambient temperature but less than 100 °C, as recited by the instant claims.

Haq et al. are relied upon as set forth above. Specifically, Haq et al. teach treating laundry with the hydrophobic agent, zeta potential modifier and fluoropolymer during the domestic rinsing of laundry and then tumble drying. See col.5,ln.25 and col.2,ln.43.

Green is relied upon as set forth above. Specifically, Green teaches the state of the art that conventional tumble dryers have a maximum temperature of 71°C (160°F). See col.3,ln.10-12.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to curing the fabric at a temperature above ambient temperature but less than 100 °C, as recited by the instant claims, because Gresser in combination

with Haq et al. and Green teach the treatment of the fabric with a composition comprising a hydrophobic agent, zeta potential modifier, and fluoropolymer in a washing machine and further suggest the use of a tumble dryer which provide maximum heat at 71 °C. One of ordinary skill in the art would have been motivated to modify the teachings of Gresser with a drying/curing step as taught by Haq et al. and Green because it would have been obvious to dry the treated fabric of Gresser and furthermore, Haq et al. and Green provide the motivation to heat laundry to cure the polymer by tumble drying at a maximum temperature of 71 °C.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Mc Ginty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner Preeti Kumar
Art Unit 1751

Douglas McGinty

DOUGLAS MCGINTY
SUPERVISORY PATENT EXAMINER

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